



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/688,217

10/15/2003

Issei Yoshida

JP920020132US1

9470

45112

7590

06/09/2008

Kunzler & McKenzie  
8 EAST BROADWAY  
SUITE 600  
SALT LAKE CITY, UT 84111

EXAMINER

ADAMS, CHARLES D

ART UNIT

PAPER NUMBER

2164

MAIL DATE

DELIVERY MODE

06/09/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/688,217	<b>Applicant(s)</b> YOSHIDA, ISSEI	
	<b>Examiner</b> CHARLES D. ADAMS	<b>Art Unit</b> 2164	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 March 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 10-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Remarks*

1. In response to communications filed on 27 March 2008, claims 10 and 14 are amended and claims 1-9 are cancelled. Claims 10-16 are pending in the application.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 10-11 and 14-16 rejected under 35 U.S.C. 103(a) as being unpatentable over Dehlinger et al. (US Patent 7,181,451) in view of Kephart et al. (US Patent 5,675,711).

As to claim 10, Dehlinger et al. teaches:

generating a word list for each of at least two categories by extracting words from a learning document set (see 6:20-28 and 9:18-40), the word list containing information on a frequency of appearance of each extracted word within each category (see 6:20-28 and 9:18-40);

Dehlinger et al. as modified does not teach:

determining an unnecessary word for a first category on the basis of the number of occurrences of the word within at least one other category wherein a word is

Art Unit: 2164

determined to be unnecessary in the first category in response to the word having a greater number of occurrences than a given standard in the at least one other category, the given standard defined irrespective of the number of occurrences of the word in the first category; and

Kephart et al. teaches:

determining an unnecessary word for a first category on the basis of the number of occurrences of the word within at least one other category wherein a word is determined to be unnecessary in the first category in response to the word having a greater number of occurrences than a given standard in the at least one other category, the given standard defined irrespective of the number of occurrences of the word in the first category (see 5:36-55); and

Dehlinger et al. as modified teaches:

eliminating words determined to be unnecessary words from each of the word lists (see Kephart et al. 5:36-55 and Dehlinger et al. 10:65-11:12).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Dehlinger et al. by the teachings of Kephart et al., since Kephart et al. teaches “the resulting classifier will not only correctly classify the strings in the example set, but will also, with high accuracy and high confidence, correctly classify novel strings not contained in the example set (see 7:25-28).

As to claim 11, Dehlinger et al. as modified teaches:

Further comprising generating a document classification catalog by eliminating the words determined to be unnecessary words from the word list (see Dehlinger et al. 7:19-26 and 10:65-11:12).

As to claim 14, Dehlinger et al. as teaches:

acquiring information on words from a document set, classifying the words according to category, and storing the words in a storage device (see 6:20-28 and 9:18-40);

recognizing the number of occurrences within at least one other category of a word belonging to a given category on the basis of the acquired information (see 6:20-28 and 9:18-40);

Dehlinger et al. does not explicitly teach:

determining an unnecessary word for a first category on the basis of the number of occurrences of the word within at least one other category wherein a word is determined to be unnecessary in the first category in response to the word having a greater number of occurrences than a given standard in the at least one other category,

Kephart et al. teaches:

determining an unnecessary word for a first category on the basis of the number of occurrences of the word within at least one other category wherein a word is determined to be unnecessary in the first category in response to the word having a greater number of occurrences than a given standard in the at least one other category (see 5:36-55),

Dehlinger et al. as modified teaches:

the given standard comprised of a predetermined threshold scaled by the number of documents in the at least one other category (see Dehlinger et al. 9:47-59. Dehlinger et al. teaches to use a 'selectivity' threshold that is based on a ratio that is computed from occurrences of words scaled by the total number of documents)

and defined irrespective of the number of occurrences of the word in the first category (see Kephart et al. 5:36-55); and

generating a document classification catalog by eliminating words determined to be unnecessary words (see Dehlinger et al. 7:19-26 and 10:65-11:12 and Kephart et al. 5:36-55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Dehlinger et al. by the teachings of Kephart et al., since Kephart et al. teaches "the resulting classifier will not only correctly classify the strings in the example set, but will also, with high accuracy and high confidence, correctly classify novel strings not contained in the example set (see 7:25-28).

As to claim 15, Dehlinger et al. teaches further comprising storing said classification catalog into the storage device (see Dehlinger et al. 10:26-39).

As to claim 16, Dehlinger et al. teaches further comprising the step of performing classification processing for classification target documents by using the classification

Art Unit: 2164

catalog stored in said storage device (see Dehlinger et al. 7:19-26, 10:26-39, and 11:25-41)

4. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dehlinger et al. (US Patent 7,181,451) in view of Kephart et al. (US Patent 5,675,711) and further in view of Sakai et al. (US Patent 7,099,819).

As to claim 12, Dehlinger et al. as modified teaches the method of claim 11.

Dehlinger et al. does not explicitly teach:

wherein the document classification catalog is comprised of a plurality of vector spaces wherein each vector space represents at least one category.

Sakai et al. teaches:

wherein the document classification catalog is comprised of a plurality of vector spaces wherein each vector space represents at least one category (see 4:4-18 and Figure 5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Dehlinger et al. by the teaching of Sakai et al., since Sakai et al. teaches that to “provide a text information analysis apparatus and a method to quickly classify and arrange a plurality of unknown texts” (see 1:61-63).

As to claim 13, Dehlinger et al. as modified teaches wherein a target classification document is defined by a document vector and wherein a distance is

defined between the document vector and each of the plurality of vector spaces such that the distance indicates a degree of similarity between the target classification document and a category represented by the vector spaces (see Sakai et al. 4:4-18 and Figure 5).

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 10-16 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES D. ADAMS whose telephone number is (571)272-3938. The examiner can normally be reached on 8:30 AM - 5:00 PM, M - F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. D. A./  
Examiner, Art Unit 2164

/Charles Rones/  
Supervisory Patent Examiner, Art Unit 2164